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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/575,551 05/22/00 THOMPSON R P97-0041US3

022249
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PM82/1109

EXAMINER

KEENAN, J

ART UNIT

PAPER NUMBER

3652

3

DATE MAILED:

11/09/00

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

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Office Action Summary

Application No.
09/575,551

Applicant(s)
Thompson et al

Examiner
Keenan

Group Art Unit
3652



- ☐ Responsive to communication(s) filed on _____.
- ☐ This action is **FINAL**.
- ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

- ☒ Claim(s) 56-63 is/are pending in the application.
- Of the above, claim(s) _____ is/are withdrawn from consideration.
- ☐ Claim(s) _____ is/are allowed.
- ☒ Claim(s) 56-63 is/are rejected.
- ☐ Claim(s) _____ is/are objected to.
- ☐ Claims _____ are subject to restriction or election requirement.

Application Papers

- ☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.
- ☒ The drawing(s) filed on 5/22/00 is/are objected to by the Examiner.
- ☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.
- ☒ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- ☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been
- ☐ received.
- ☐ received in Application No. (Series Code/Serial Number) _____.
- ☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

- ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- ☒ Notice of References Cited, PTO-892
- ☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____
- ☐ Interview Summary, PTO-413
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

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1. The application papers filed in this application indicates that it is a continuation of copending application SN 08/845,662. This is incorrect, as that application, which issued on 10/12/99 to Kent, neither is copending nor has common inventorship.
2. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.
3. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the step of moving a carriage holding the workpiece laterally within the enclosure (claim 63) must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.
4. The amendment filed 5/22/00 is objected to under 35 U.S.C. 132 because it introduces new matter into the disclosure. 35 U.S.C. 132 states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: the recitation in claims 56, 59, and 63 of a generic "workpiece" is broader in scope than that set forth in the original disclosure, which is limited to wafers and other similar semiconductor articles. Therefore, the recitation of a workpiece potentially covers

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methods of processing types of articles other than those disclosed in the original specification and claims.

Furthermore, the recitation in claim 56 of “moving a sealed container ... through an interface port”, then moving “to a docking station”, and then “unsealing the container” is also considered to be new matter in that pages 52-56 of the specification and figures 41-42 disclose that the container is unsealed at the interface before moving to the docking station, where access to the workpiece in the container is provided.

The recitation in claim 61 that the container is moved vertically before being unsealed is also not taught by the original disclosure.

Applicant is required to cancel the new matter in the reply to this Office action.

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. Claims 56-63 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. See paragraph 4 above.

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7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claims 56-63 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Irregardless of the issue of new matter, the recitation in claim 56 that the container is moved in a sealed condition from the interface port to the docking station before being unsealed contradicts that which is described in the disclosure, and is therefore indefinite.

Also, the last line of claim 56 is incomplete.

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 56-63 are rejected under 35 U.S.C. 103(a) as being unpatentable over Iwai et al in view of Kawabata.

Iwai et al show a semiconductor processing method including moving a sealed container 30 to an enclosed workspace having an interface port 14, then to a docking station for receiving

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the container where the container is unsealed by removing a panel thereof, engaging an article in the container with engagement head 42 and placing the article onto a shelf 46, lifting the article from the shelf with a transfer robot comprising carriages 28, 47, and 50 which carry the workpiece to a process chamber 1, opening the process chamber, placing the article into the process chamber, closing the chamber, and processing the article.

Although new matter limitations are not accorded patentable weight, note the embodiments shown in figures 11 and 17 in which the sealed container is moved vertically through the interface port before being moved to a docking station where it is unsealed.

Iwai et al do not show moving the article from a horizontal to a vertical orientation.

Kawabata shows a wafer transfer apparatus including arm 10 for pivoting a wafer carrier C1 about a horizontal axis such that the wafers therein are moved from a horizontal to a vertical orientation prior to the wafers being removed therefrom.

It would have been obvious for one of ordinary skill in the art to have modified the apparatus of Iwai et al by moving the article from a horizontal to a vertical orientation as the engagement head transferred the article from the docking station to the shelf, as Kawabata teaches that moving wafers in a carrier from a horizontal to a vertical orientation prior to their processing is well known in the art, as certain processes are desirably performed on wafers in a vertical orientation.

Although Kawabata may not show the same type of relay for performing the reorientation of the wafers, the relevant aspect of Kawabata is that the reference supports the showing that

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moving wafers from a horizontal to a vertical orientation would have been a desirable modification to the apparatus of Iwai et al. The relay mechanism of Iwai et al, being a multi-jointed robotic arm, clearly has the capability to move the wafer carrier such that the wafers therein would be oriented vertically. Thus, modifying Iwai et al as suggested would have required no undue experimentation and produced no unexpected results.


11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Sakata et al, Iwabuchi, and Ishii et al show wafer processing systems generally similar to that shown by Iwai et al in which wafers in a carrier are initially received in one of a vertical or horizontal orientation and are transferred into the other of a horizontal or vertical orientation prior to processing.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to James Keenan whose telephone number is (703) 308-2559.

jwk

November 6, 2000


JAMES W. KEENAN
PRIMARY EXAMINER